Remarks

The Examiner rejected claims 1-15 and 17-21 under 35 USC 103(a) as unpatentable over Sawyer in view of Velenyi. Applicants respectfully traverse that rejection.

In its broadest embodiment applicants claim a hydroprocessing process that utilizes a multimetallic catalyst that contains at least one Group VIII non-noble metal and at least two Group VIB metals where the ratio of Group VIB metals to Group VIII non-noble metals is from 10:1 to 1:10.

Sawyer discloses a hydroprocessing process but does not disclose as the Examiner states using "... a catalyst comprised of at least one Group VIII non-noble metal and at least two Group VIB metal ..." Sawyer teaches using Mo sulfides and mixtures of transition metal sulfides. Mo sulfides, of course, comprise only a single Group VIB metal. Another example given by Sawyer is Co Mo. Again this mixed metal catalyst contains only a single Group VIB metal. The third example in Sawyer is CoNiMo which contains only one Group VIB metal and two Group VIII non-noble metals. None of the disclosed catalysts suggest applicants' catalyst, especially one having the specific ratio of Group VIB to Group VIII ratio.

The Examiner cites Velenyi in an attempt to overcome the deficiencies of Sawyer. Velenyi, however, is directed toward a catalyst for converting methane to higher hydrocarbons such as ethane and has nothing to do with hydroprocessing. Hence, there is absolutely no motivation for substituting the catalyst of Velenyi in the process of Sawyer. Additionally, in the catalyst of Velenyi, a Group VIII metal need not be present. (See col. 3, lines 41 and 42 where the ratio of c: (a+b) can be 0:100). Also Velenyi's catalyst may contain noble metals from Group VIII when Group VIII metals are present. Mention also needs to be made of the fact that M in the catalyst

formula of Velenyi may be any one or more of 32 different metals and A may be any one or more of 25 different metals, with absolutely no suggestion as to which of these 57 elements would be useful in combination with at least two Group VIB metals in hydroprocessing processes.

The Examiner clearly has failed to show why it would be obvious to one with ordinary skill in the art to use a catalyst for converting methane to ethane in a process for hydrodesulfurization and hydrodinitrogenation. Nor has the Examiner shown how one would select the applicants' catalyst from those that fall within the range of catalysts disclosed in Velenyi.

For the foregoing reasons applicants respectfully request the Examiner to reconsider and withdraw his rejection and pass the case to issue.

Respectfully submitted,

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[X] Pursuant to 37 CFR 1.34(a)

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